

## CLAIMS

- [c1] 1. A method in a switch for multicasting data whose delivery is not guaranteed, the method comprising:
- receiving data to be multicasted;
  - storing the received data in a buffer;
  - identifying destination ports through which the received data is to be transmitted; and
  - repeating determining the destination ports that are currently available and through which the data has not already been transmitted and transmitting the data through the determined destination ports until the data has been transmitted through all the destination ports or until the data has timed out at the switch.
- [c2] 2. The method of claim 1 wherein each port of the switch has its own buffer.
- [c3] 3. The method of claim 1 wherein the data indicates that the data is to be multicasted without acknowledgement.
- [c4] 4. The method of claim 1 wherein the data indicates a Fibre Channel class 3 data.
- [c5] 5. The method of claim 1 wherein the switch is InfiniBand compatible.
- [c6] 6. The method of claim 1 wherein the switch is Fibre Channel compatible.

- [c7]            7.     The method of claim 1 wherein the switch is an interconnect fabric module.
  
- [c8]            8.     The method of claim 1 wherein the identifying of destination ports includes using a virtual address and a label table that maps virtual addresses to destination ports.
  
- [c9]            9.     The method of claim 1 including when it is determined that a destination port is not available, determining whether an equivalent port is available.
  
- [c10]           10.    A routing device that receives a communication to be multicasted to destinations, that stores the communication in a buffer, that identifies destination ports through which the received communication is to be transmitted to the destinations, and that transmits the communication to the identified destination ports as the destination ports become available until the communication has been transmitted through all the destination ports.
  
- [c11]           11.    The routing device of claim 10 wherein the transmitting of the communication to the identified destination ports as the destination ports become available continues until a criterion is satisfied.
  
- [c12]           12.    The routing device of claim 11 wherein the criterion is a time out.
  
- [c13]           13.    The routing device of claim 11 wherein the criterion is the buffer is needed to store another communication.
  
- [c14]           14.    The routing device of claim 10 wherein the communication is received via a port and each port of the routing device has its own buffer.

[c15] 15. The routing device of claim 10 wherein the communication indicates that the communication is to be multicasted without acknowledgement.

[c16] 16. The routing device of claim 10 wherein the communication indicates a Fibre Channel class 3 communication.

[c17] 17. The routing device of claim 10 wherein the routing device is Fibre Channel compatible.

[c18] 18. The routing device of claim 10 wherein the routing device is InfiniBand compatible.

[c19] 19. The routing device of claim 10 wherein the routing device is a switch.

[c20] 20. The routing device of claim 10 wherein the routing device is an interconnect fabric module.

[c21] 21. The routing device of claim 10 wherein the communication includes a virtual address and the routing device includes a label table that maps the virtual address to destination ports.

[c22] 22. The routing device of claim 10 that identifies an equivalent destination port when the identified destination port is not available.

[c23] 23. A method in a routing device for multicasting a communication, the method comprising:  
receiving the communication; and

transmitting the received communications through destination ports of the routing device as they become available until a criteria indicates to stop transmitting the communications.

[c24] 24. The method of claim 23 wherein the transmitting includes determining the destination ports that are currently available and through which the communication has not already been transmitted and transmitting the communication through the determined destination ports.

[c25] 25. The method of claim 23 wherein the criteria is a time out.

[c26] 26. The method of claim 23 wherein the communication is not guaranteed to be delivered to all destinations.

[c27] 27. The method of claim 23 including storing the communication in a buffer.

[c28] 28. The method of claim 23 wherein the communication indicates that the communication is to be multicasted without acknowledgement.

[c29] 29. The method of claim 23 wherein the communication indicates a Fibre Channel class 3 communication.

[c30] 30. The method of claim 23 wherein the routing device is InfiniBand compatible.

[c31] 31. The method of claim 23 wherein the routing device is Fibre Channel compatible.

[c32] 32. The method of claim 23 wherein the routing device is an interconnect fabric module.

[c33] 33. The method of claim 23 including identifying destination ports using a virtual address and a label table that maps virtual addresses to destination ports.

[c34] 34. The method of claim 23 including determining whether a destination port is available and when it is determined that a destination port is not available, determining whether an equivalent port is available.

[c35] 35. A routing device comprising:  
means for receiving a communication to be multicasted to destinations;  
means for storing stores the communication in a buffer;  
means for identifying destination ports through which the received  
communication is to be transmitted to the destinations; and  
means for transmitting the communication to the identified destination ports  
as the destination ports become available until a criterion has been  
satisfied.

[c36] 36. The routing device of claim 35 wherein the criterion is transmitting of the communications to all of the identified destination ports.

[c37] 37. The routing device of claim 35 wherein the criterion is a time out.

[c38] 38. The routing device of claim 35 wherein the criterion is the buffer is needed to store another communication.

[c39] 39. The routing device of claim 35 wherein the communication is received via a port and each port of the routing device has its own buffer.

[c40] 40. The routing device of claim 35 wherein the communication indicates that the communication is to be multicasted without acknowledgement.

[c41] 41. The routing device of claim 35 wherein the communication indicates a Fibre Channel class 3 communication.

[c42] 42. The routing device of claim 35 wherein the routing device is Fibre Channel compatible.

[c43] 43. The routing device of claim 35 wherein the routing device is InfiniBand compatible.

[c44] 44. The routing device of claim 35 wherein the routing device is an interconnect fabric module.

[c45] 45. The routing device of claim 35 wherein the communication includes a virtual address and the routing device includes means for mapping the virtual address to destination ports.

[c46] 46. The routing device of claim 35 includes means for identifying an equivalent destination port when the identified destination port is not available.

TOP SECRET